

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) High-strength steel sheet excellent in hole-expandability and ductility, consisting essentially of, in mass%,

C: not less than 0.01 % and not more than 0.20 %,

Si: not more than 1.5 %,

Al: not less than ~~0.08~~ 0.18% to not more than 1.5 %,

Mn: not less than 0.5 % and not more than 3.5 %,

P: not more than 0.2 %,

S: not less than 0.0005 % and not more than 0.009 %,

N: not more than 0.009 %,

Mg: not less than 0.0006 % and not more than 0.01 %,

O: not more than 0.005 % and

Ti: not less than 0.01 % and not more than 0.20 % and/or

Nb: not less than 0.01 % and not more than 0.10 %,

with the balance being iron and unavoidable impurities,

having the Mn%, Mg%, S% and O% satisfying equations (1) to (3), allowing precipitation of Mg-sulfides while impeding the precipitation of Mn- sulfides, the Al% and Si% satisfying equation (4), and the Ti%, C%, Mn% and Nb% satisfying equations (5) to (7), and containing not less than 5.0×10^2 per square millimeter and not more than 1.0×10^7 per square millimeter of composite precipitates of MgO, MgS and (Nb, Ti)N of not smaller than 0.05 μm and not larger than 3.0 μm ,

having the a structure primarily comprising bainite, and

$$[\text{Mg}\%] \geq ([\text{O}\%]/16 \times 0.8) \times 24 \quad [[\dots]] (1)$$

$$[\text{S}\%] \leq ([\text{Mg}\%]/24 - [\text{O}\%]/16 \times 0.8 + 0.00012) \times 32 \quad [[\dots]] (2)$$

$$[\text{S}\%] \leq 0.0075/[\text{Mn}\%] \quad [[\dots]] (3).$$

$$[\text{Si}\%] + 2.2 \times [\text{Al}\%] \geq 0.35 \quad [[\dots]] (4).$$

$$0.9 \leq 48/12 \times [\text{C}\%]/[\text{Ti}\%] < 1.7 \quad [[\dots]] (5)$$

$$50227 \times [C\%] - 4479 \times [Mn\%] > -9860 \quad [[...]] (6)$$

$$811 \times [C\%] + 135 \times [Mn\%] + 602 \times [Ti\%] + 794 \times [Nb\%] > 465 \quad [[...]] (7).$$

2-8. (canceled).

9. (currently amended) High-strength steel sheet excellent in hole-expandability and ductility, consisting essentially of, in mass%,

C: not less than 0.01 % and not more than 0.20 %,

Si: not more than 1.5 %,

Al: not less than ~~0.08~~ 0.18% to not more than 1.5 %,

Mn: not less than 0.5 % and not more than 3.5 %,

P: not more than 0.2 %,

S: not less than 0.0005 % and not more than 0.009 %,

N: not more than 0.009 %,

Mg: not less than 0.0006 % and not more than 0.01 %,

O: not more than 0.005 % and

Ti: not less than 0.01 % and not more than 0.20 % and/or

Nb: not less than 0.01 % and not more than 0.10 %,

with the balance being iron and unavoidable impurities,

having the Mn%, Mg%, S% and O% satisfying equations (1) to (3), allowing precipitation of Mg-sulfides while impeding the precipitation of Mn- sulfides, the Al% and Si% satisfying equation (4), and the C%, Si%, Mn% and Al% satisfying equation (8), and containing not less than 5.0×10^2 per square millimeter and not more than 1.0×10^7 per square millimeter of composite precipitates of MgO, MgS and (Nb, Ti)N of not smaller than 0.05 μm and not larger than 3.0 μm , and

having ~~the~~ a structure primarily comprising ferrite and bainite, and

$$[Mg\%] \geq ([O\%]/16 \times 0.8) \times 24 \quad [[...]] (1)$$

$$[S\%] \leq ([Mg\%]/24 - [O\%]/16 \times 0.8 + 0.00012) \times 32 \quad [[...]] (2)$$

$$[S\%] \leq 0.0075/[Mn\%] \quad [[...]] (3)$$

$$[Si\%] + 2.2 \times [Al\%] \geq 0.35 \quad [[...]] (4)$$

$$-100 \leq 300[C\%] + 105[Si\%] - 95[Mn\%] + 233[Al\%] \quad [[...]] (8).$$

10. (original) High-strength steel sheet excellent in hole-expandability and ductility described in claim 9, characterized in that;

not less than 80 % of crystal grains having a short diameter (ds) to long diameter (dl) ratio (ds/dl) of not less than 0.1 exist in the steel structure.

11. (original) High-strength steel sheet excellent in hole-expandability and ductility described in claim 10, characterized in that;

not less than 80 % of ferrite crystal grains having a diameter of not less than 2 μm exist in the steel structure.

12-18. (canceled).

19. (previously presented) High-strength steel sheet excellent in hole-expandability and ductility described in claim 1, wherein Si is present in an amount not less than 1.2% and not more than 1.5 %.

20. (previously presented) High-strength steel sheet excellent in hole-expandability and ductility described in claim 9, wherein Si is present in an amount not less than 1.2% and not more than 1.5 %.

21. (previously presented) High-strength steel sheet excellent in hole-expandability and ductility described in claim 1, wherein Ti is present in an amount not less than 0.130 % and not more than 0.20 %.

22. (previously presented) High-strength steel sheet excellent in hole-expandability and ductility described in claim 9, wherein Ti is present in an amount not less than 0.120 % and not more than 0.20 %.

23. (new) High-strength steel sheet excellent in hole-expandability and ductility described in claim 1, wherein Al is not less than 0.2% to not more than 1.5 %, and said steel sheet is characterized by having a strength exceeding 980 N/mm².

24. (new) High-strength steel sheet excellent in hole-expandability and ductility described in claim 9, wherein Al is not less than 0.2% to not more than 1.5 %, and said steel sheet is characterized by having a strength exceeding 590 N/mm².